IN THE CLAIMS

1. (Previously presented) A method for DC feed control for a line card, comprising:

receiving a signal from a subscriber line comprising at least one of a voice component and a DC component;

converting the voice component of the signal to a digital voice signal using an analog-to-digital converter to allow further processing of the digital voice signal;

converting the DC component of the signal to a digital signal using the analog-to-digital converter employed to convert the voice component of the signal; and

adjusting a DC feed to the subscriber line based on the digital signal.

2. (Previously presented) The method of claim 1, wherein adjusting the DC feed comprises:

integrating the digital signal; and

adjusting a voltage provided to the subscriber line based on the integrated signal.

3. (Previously presented) The method of claim 1, wherein adjusting the DC feed comprises adjusting a current level applied to the subscriber line.

4. (Previously presented) The method of claim 2, wherein allowing further processing of the digital voice signal comprises providing the digital voice signal to a CODEC for further processing.

5. (Previously presented) A method for DC feed control for a line card, comprising:

determining if the line card is operating in a current limit region of a DC feed curve;

synthesizing a curve in the current limit region of the DC feed curve;

determining a loop voltage based on the synthesized curve; and

applying the loop voltage to the subscriber line.

6. (Original) The method of claim 5, wherein determining if the line card is operating in the current limit region includes:

generating a current value proportional to a loop current flowing from the subscriber line; and

determining if the line card is operating in the current limit region of the DC feed curve in response to generating the current value.

7. (Original) The method of claim 6, wherein determining if the line card is operating in the current limit region of the DC feed curve in response to generating the current value includes determining if the loop current is greater than a first preselected value.

8. (Original) The method of claim 5, further including determining the loop voltage in at least one of an anti-saturation region and a resistance feed region in response to determining the line card is not operating in the current limit region.

9. (Original) A method for DC feed control for a line card, comprising:

generating a current value proportional to a loop current flowing from a subscriber line;

determining if the line card is operating in a current limit region of a DC feed curve in response to generating the current value;

determining a loop voltage based on synthesizing a curve in the current limit region; and

applying the loop voltage to the subscriber line.

10. (Original) The method of claim 9, wherein determining if the line card is operating in the current limit region of the DC feed curve in response to generating the current value includes determining if the loop current is greater than a first preselected value.

11. (Original) The method of claim 9, further including determining the loop voltage in at least one of an anti-saturation region and a resistance feed region in response to determining the line card is not operating in the current limit region.

12. (Previously presented) An apparatus, comprising:

a digital signal processor capable of:

determining if the line card is operating in a current limit region of a DC feed curve; and

determining a loop voltage based on a synthesized curve in the current limit region; and

a circuitry for applying the loop voltage to the subscriber line.

13. (Previously presented) The apparatus of claim 12, wherein the digital signal processor capable of determining if the line card is operating in the current limit region includes the digital signal processor capable of:

generating a current value proportional to a loop current flowing from the subscriber line; and

determining if the line card is operating in the current limit region of the DC feed curve in response to generating the current value.

14. (Original) The apparatus of claim 13, wherein the synthesized curve is based on an anti-saturation region and the current limit region of the DC feed curve.

15. (Previously presented) The apparatus of claim 13, wherein the digital signal processor is further capable of determining the loop voltage in at least one of an anti-saturation region and a resistance feed region in response to determining the line card is not operating in the current limit region.

16. (Previously Presented) An apparatus, comprising:

a first path for receiving a signal and determining a cancellation current proportional to a current flowing from the subscriber line; and

a second path for adjusting a DC level control based on the determined cancellation current, wherein adjusting the DC level control comprises providing a voltage to the subscriber line based on the cancellation current.

17. (Previously presented) The apparatus of claim 16, wherein the first path comprises an integrator for integrating the digital signal.

18. (Previously presented) The apparatus of claim 17, wherein the apparatus operates in at least one of an anti-saturation region, a resistive feed region, and a current limit region, wherein the first path comprises a current limiter for limiting the digital signal to an upper limit of the current limit region.

19. Cancelled.

20. (Original) A line card, comprising:

a digital signal processor capable of:

determining if the line card is operating in a current limit region of a DC feed curve; and

determining a loop voltage based on a synthesized curve in the current limit region; and

a subscriber line interface circuit capable of applying the loop voltage to the subscriber line.

21. (Original) The line card of claim 20, wherein the digital signal processor is further capable of determining the loop voltage in at least one of an anti-saturation region and a resistance feed region in response to determining the line card is not operating in the current limit region.

22. (Original) The line card of claim 20, wherein the subscriber line interface circuit is a voltage-feed subscriber line interface circuit.

23. (Original) An apparatus, comprising:

means for determining if a line card is operating in a current limit region of a DC feed curve;

means for determining if the line card is operating in a current limit region of a DC feed curve in response to generating the current value;

means for determining a loop voltage based on synthesizing a curve in the current limit region; and

means for applying the loop voltage to the subscriber line.

24. (Previously presented) A method, comprising:

receiving a signal from a subscriber line comprising at least one of a voice component and a DC component;

processing the voice component of the signal using one or more components in a voice path, wherein the one or more components comprises at least an analog-to-digital converter, and wherein processing the voice component comprises converting the voice component of the signal to a digital voice signal using the analog-to-digital converter to allow further processing of the digital voice signal;

processing the voice component of the signal using one or more components in a DC feed path, wherein the one or more components comprises at least the

analog-to-digital converter, and wherein processing voice component comprises converting the DC component of the signal to a digital signal using the analog-to-digital converter; and

adjusting a DC feed to the subscriber line based on the digital signal.

25. (Previously Presented) The method of claim 24, wherein the voice path comprises a CODEC, and wherein processing the voice component comprises providing the digital voice signal to the CODEC.